



BD 168 423

HE 011 128

AUTHOR TITLE PUB DATE NOTE Changing Students and the Impact on Colleges.
11 Jan 79
23p.; Paper presented to the Educational Starr
Seminar (Washington, D.C., January 11, 4979)

EDRS PRICE DESCRIPTORS

MF01/PC01 Plus Postage.
Access to Education; Adult Education; *Adult
Students; *College Students; Demography; Educational
Demand; Educational Opportunities; Enrollment Trends;
*Higher Education; *Nontraditional Students; *Student
Characteristics; Trend Analysis
Lifelong Learning

IDENTIFIERS

ABSTRACT

Current trends in higher education, specifically those related to the changing characteristics of students and the impact of those changes on colleges and universities, are addressed. Three distinct trends contributing to the changing characteristics of college students are: the decline of 18-year-olds in the population, the rising proportion of new students in the college population, and the increase in adult part time learners. New students have resulted from equal opportunity and the expansion of open admissions community colleges. These trends will affect colleges differentially, depending on whether they serve national or local clientele, whether they are located in areas of declining or growing population, and what kinds cf students they attract or are prepared to attract. Factors that can te considered in projecting college enrollments are demographic trends and the type of college: Demographic trends behind the adult education movement and characteristics of adult learners are described. The analysis also considers: how the labor market will affect education, differences between actual learners and those who say they are interested in education but who are not currently participating, advantages that would result from funding education information centers, characteristics of the new students, and the lack of federal effort to acknowledge the social desirability of lifelong learning and adult education. (SW)

 "PERMISSION TO REPRODUCE THIS , MATERIAL HAS BEEN GRANTED BY

K. Paturin

TO THE EDUCATIONAL RESOURCES, WEODMATION CENTER TERRITY AND THE ERIC SYSTEM CONTRACTORS

U 5 DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRO-DUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGIN-ATING IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRE-SENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CHANGING STUDENTS AND THE IMPACT ON COLLEGES

K. Patricia Cross

Distinguished Research Scientist Educational Testing Service

I have been asked to talk this evening about current trends in higher education--specifically those related to the changing characteristics of students and the impact of those changes on colleges and universities.

Some educators are looking at the predicted changes, especially at demographic projections, and seeing mostly threat in the years ahead.

Others are looking toward new markets and new needs and seeing mostly opportunity. By and large, the pessimists are in traditional colleges geared to serving a selected, residential, full-time student body of 18 to 21 year olds. As educational planners and budget officers know only too well, the number of 18 to 21 year olds in the United States population will peak next year and then drop until 1995, when it will begin to rise again.

Today's optimists regarding the future of higher education tend to come from open admissions, non-residential colleges serving part-time and full-time students across the full spectrum of age and ability. Theoretically, open door commuter colleges are nowhere near their growth ceiling, and they appear to be in a strong position to tap into two groups of potential college

Prepared for the Educational Staff Seminar, Washington, D.C. January 11, 1979.

students who are underrepresented in the college going population today. The majority of working adults are not now taking college classes, and neither are the majority of 18 year olds from the lower socioeconomic half of the population.

There is a lot of talk these days about a new student clientele, commonly referred to as "new" and "nontraditional" students. While these terms are bandied about without much precision, there does seem to be a general understanding that new and nontraditional students are all those who were underrepresented in college student bodies around the year 1950. They consist of rising proportions of ethnic minorities, low income students, women, low academic achievers, adult part-time students, and the handicapped.

In the interest of clarity, I separate the new student clientele into two major groups, defining them not by Census Bureau descriptors such as age, sex, and race, but in terms of educational needs. In my own research I have used the term "New Students" to describe those who are educationally disadvantaged, in the sense that they need help with basic skills, motivation, and guidance on how to make it in the educational system (Cross, 1971). New Students may be white or black, rich or poor, but they share the common experience of poor past performance in school. Without "open admissions" and "special" admissions, they would not be considered "college material".

The term "nontraditional students" is generally used to describe adult part-time learners for whom education is a secondary rather than primary activity. Higher education needs to respond quite differently to these two groups. By and large New Students have basic skills deficiencies, are academically dependent, and need considerable help, attention, and supervision.

Today's adult learners, in contrast, consist largely of those who have been successful in school in the past. They tend to be achievement oriented, rather independent, and their primary educational needs are for schedules, curricula, and instruction appropriate to their maturity and adult responsibilities.

Thus there are three distinct trends contributing to the changing characteristics of college students. One is the decline of 18 year olds in the population, the result of the low birthrate following the baby boom of the postwar years. The second is the rising proportion of New Students in the college population, which is the combined result of the press for equal educational opportunity and the rapid expansion of open admissions community colleges. The third is the increase in adult part-time learners, a world-wide phenomenon known as lifelong learning in the United States and recurrent education abroad. These three trends will affect colleges differentially, depending on whether they serve national or local clientele, whether they are located in areas of declining or growing population, and what kinds of students they attract or are prepared to attract.

A great deal of study and attention has been given to the probable impact of demographics on college enrollments. By 1985, the number of 18 year olds in the population will shrink by 15 percent; by 1992 there will be 25 percent fewer 18 year olds in the United States than there were in 1975. That does not mean, of course, that every college should plan for reduced enrollments. Some should probably plan for a modest increase in entering freshmen by 1985. Let me try to make the picture concrete by walking through the figures for the District of Columbia as they are projected by the American Council on Education (Henderson, 1977). The number of 18 year olds in the District is expected to

drop an astounding 44 percent by 1985, but historically, the District has done a booming business of importing undergraduates from other states. If that continues and if roughly one-third of the District's 18 year olds continue to enroll as college freshmen, there should be an 8 percent increase in the number of freshmen enrolled in District colleges in 1985. New Jersey, on the other hand, can expect a 43 percent drop in college enrollments by 1985 because more people, are moving out of New Jersey than into it, and because historically large numbers of New Jersey 18 year olds enter out-of-state colleges, while few outsiders come into the state for college. Thus the demography of the birth statistics will have dramatically different effects on colleges depending, in part, on location.

Another factor to be considered in projecting enrollments is the type of college. Public community colleges seem to be on the cutting edge of the changes that are occuring now. They are generally in a good position with respect to both location and faculty attitudes to serve higher education's non-traditional and New Students. While some will face significant loss of 18 year olds, their role in the 1980s will generally be consistent with their founding mission.

Highly selective colleges and universities will probably not be greatly affected by the dirth of 18 year olds either. They will continue to compete quite successfully for students, taking the better students from less selective institutions if they must in order to maintain their enrollments.

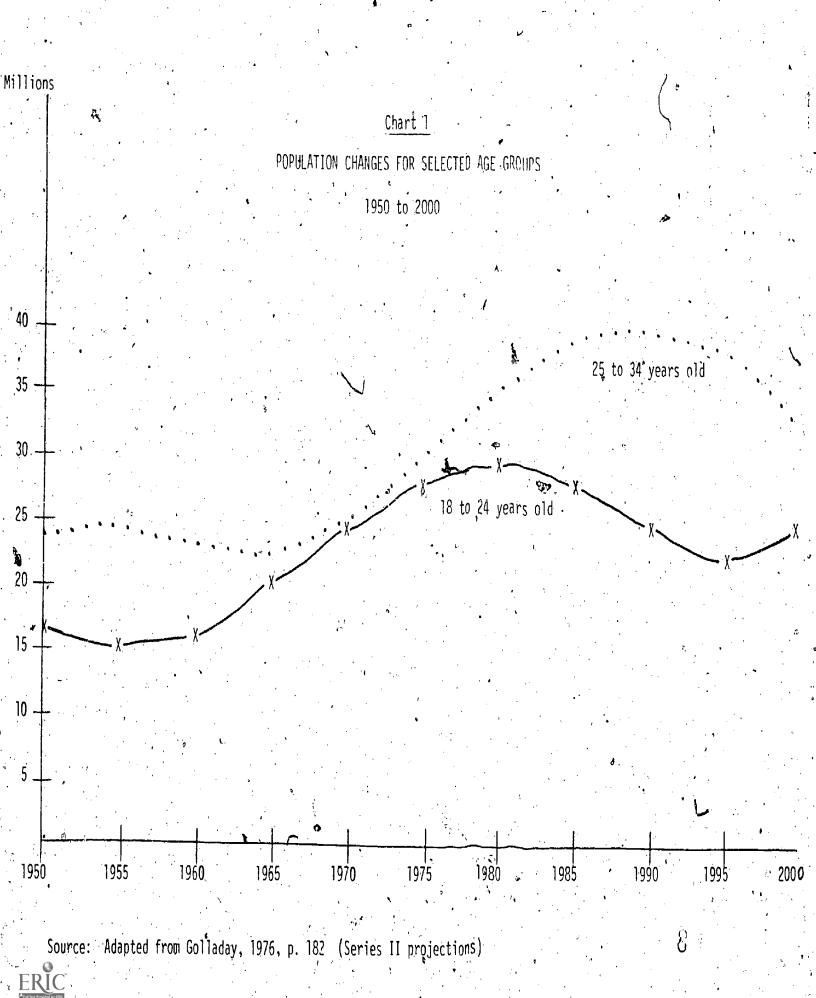
Although most community colleges have a lot of work to do to fully accommodate adult learners, the leadership appears to be making a promising start on the task. See for example, the AACJC 1979 Assembly Papers, especially "Restructuring Community Colleges for Lifelong Education" by Robert McCabe.

That means, however, that many moderately selective four-year colleges, squeezed in the competition between the attractiveness of prestige institutions and the convenience and low cost of community colleges, are going to be in serious difficulty by 1985 and probably fighting for survival by 1990. How many will be able to hang on until the late 1990s when the pool of collegeage youth starts to increase again is a question of considerable national importance.

I will return to the plight of the moderately selective four-year college in a minute, but since it should be viewed in the context of some other changes, let us take a look at the potential of adult learners for taking up some of the slack of the decline in the younger age groups.

Nontraditional Students

The demographics behind the adult education movement are really very fortuitous for colleges. Chart I shows clearly how the baby boom generation compensates for the baby bust generation. The number of 25 to 34 year olds in the population peaks in 1990, just as the 18 to 24 year old population approaches its nadir. Then as the 25 to 34 year olds begin to deciline in the 1990s, the grandchildren of the baby boom generation begin to reach college age, causing the upswing in the curve for 18 to 24 year olds. Thus if colleges could fill the seats of traditionally-aged students with older students for the next couple of decades, it would appear to be a nice solution for colleges as well as for society. There are several problems, of course, to any such neat solution.



One is that it takes four or five adult learners to make one full-time equivalent (FTE). Another is that there is a great deal of competition from other agencies in the society for adult learners, and it is by no means clear that colleges can gain or should have any inside track to the adult learning market. A third problem that worries federal and state budget officers is that if the adult learning movement gains momentum during the 1980s, is there any way of dampening it down in the 1990s when the 18 year old population regains its numerical strength? Or will the turn of the century herald the emergence of the learning society in which a majority of the American public are directly engaged in teaching or learning or both?

Personally I think that it is highly probable that the year 2000 will initiate an enormous resurgence in higher education. At that time, full-time enrollments are expected to go up substantially, and no doubt part-time enrollments will continue to increase as well. Furthermore, half of all college faculty, most of whom were hired during the boom period of the 1960s, will be retiring and will be replaced and supplemented by new blood. Buildings built in the 1950s and 1960s will be wearing out, to be replaced or remodeled, or perhaps demolished in favor of other forms of instructional delivery.

In the meantime, however, there is the matter of understanding the characteristics and needs of today's adult learners. Figures regarding the participation of adult learners vary greatly, depending on the definition of "adult learner" and on the particular study quoted. National surveys indicate that there are between 17 million (Boaz, 1978) and 32 million (Carp, Peterson, and Roelfs 1974) adult learners in the United States when "adult learner" is

defined as a part-time student 17 years of age or older pursuing some form of organized instruction, which may be credit or noncredit, offered by industry and community agencies as well as by colleges and universities. My best guess is that one in four American adults is taking a class or participating in an organized learning group this year. That is a very substantial learning force, with a head count two to three times as great as the total number of college students enrolled for degree credit. Postsecondary educational institutions (including all two- and four-year colleges and universities plus trade and business schools), however, provide less than half of the instruction for adults, and most of that is noncredic (Boaz, 1978).

As a group, today's adult learners represent the advantaged classes of society. They are disproportionately young, white, well-educated, and making good salaries. Those who still think of night school as a poor man's college for lower class immigrants are clearly out-of-date. Adult education today is moving toward elitism, with the following populations significantly under-represented: Blacks, people with less than a high school education, those with annual family incomes under \$8,000, people aged 45 and older, and those living, in the central city or on the farm (Boaz, 1978).

Furthermore, in the face of today's lack of any very visible social policy regarding adult learners, the situation with respect to equal opportunity is becoming worse not better for all groups except women. The greatest increases in educational participation between 1969 and 1975 were made by white women with college degrees and family incomes of \$25,000 a year and over. The rate of growth for women was more than double that for men; adults

learning activities for the college-educated increased almost twice as fast as for high school graduates; and the participation for whites increased eight times as fast as that for blacks (Boaz, 1978). Thus not only are white, well-educated people with good jobs already overrepresented on the adult education scene, but they are making much faster progress than their less well-educated peers, and the educational gap between the "haves" and "have nots" is increasing.

Today s adult learners are quite attractive even to the most traditional faculty members. Given the choice of teaching night classes to bright, hardworking adults or remedial classes to disadvantaged 18 year olds, most faculty members, especially those in moderately selective four-year colleges, would probably opt for the adults. Let us see then what the chances are for colleges hardest hit by the decline of the 18 year old population to attract increasing numbers of adults in the 1980s and 1990s.

Survey research is unanimous in concluding that the single most important predictor of whether an adult will engage in organized learning activities is past level of educational attainment (Cross, 1979). Learning is addictive. The more education people have, the more they seem to want; and the populace is becoming better educated with each passing generation. The average adult over the age of 25 now has 12.3 years of formal schooling, up from 9.3 just one generation ago (Golladay, 1977). Since high school graduates are almost four times as likely to participate in adult education as non-high school graduates, the rising educational attainment of the populace should result in an increased demand for learning activities.

A second social condition that has had, and will no doubt continue to have, a dramatic impact on educational interest and participation is the changing role of women. Between 1969 and 1975, the number of adult women learners increased 45 percent, compared to an 18 percent increase for men (Boaz, 1978). Right now, it is hard to imagine factors that would decrease the demand for education among women unless women become disenchanted with new career opportunities or "the family" does an about face and moves in directions quite contrary to today's trends.

A third factor that must be considered is the labor market. Although there is much controversy now over the market value of education, specifically a college degree, there is little doubt that competition for the more desirable jobs will increase as members of the large baby boom generation find themselves in fierce competition with one another for job promotion. The "promotion squéeze" will probably have a number of ramifications for education:

- * First, people whose promotion is blocked in one career line may decide on a mid-life career change. A recent study estimated that there are forty million Americans in a state of transition regarding their jobs or careers; 60 percent of them plan to seek additional education (Arbiter, et al., 1978).
- A second option for people whose job promotion is blocked is to find satisfaction in other pursuits--perhaps through learning for its own sake or through leisure-time activities that require new learning.

 The greatest growth by subject area in adult education in recent years has been in social life and recreation, closely followed by personal and family living (Boaz, 1978).

Third, the predicted job competition will probably encourage older people who are in the jobs and younger persons who want those jobs to gain a competitive edge throus further ducation. This personal initiative, buttressed hendency of states and occupational livensing and tendency of states and almost certainly heighten future demand for adult education.

For all these reasons, increased competition in the labor market is expected to increase participation in adult education. At the same time, competitive labor conditions may make people think twice about leaving their jobs for education. What in fact seems to be happening is that people are hanging onto their jobs and studying part-time—even younger students without families to support.

It looks as though American society is moving away from the "linear lifeplan" in which education is for the young, work for the middle aged, and enforced leisure for the elderly (Best and Stern, 1976), toward a blended lifeplan in which education, work and leisure go on concurrently throughout life (Cross, 1978b). The "good life" today is not likely to consist of all work or all study for the average adult but rather of a blend of part-time work, part-time study, and part-time leisure.

Finally, the strong motivation that many colleges now have for attracting adult learners is driving participation rates up. There is ample research to show that making education more accessible increases participation, sometimes dramatically (Bashaw, 1965; Bishop and Van Dyk, 1977; Trent and Medsker, 1965; Willingham, 1970). And there is no doubt that many colleges.

are doing everything possible (within the constraints of money, location, and sometimes stubbornly entrenched faculty attitudes) to make college programs attractive and accessible to adult learners.

The number of colleges and universities offering noncredit courses has more than doubled in recent years, going from 1,102 institutions in 1968 to 2,225 in 1976 (Kemp, 1978). Furtherr year 1970, even rather traditional colleges began to launch a variety of degree programs and services designed to attract older part-time students. A national survey conducted in 1972 (Ruyle and Geiselman, 1974) found that between a third and half of all American colleges and universities offered programs for nontraditional students.

It is probably a fairly safe guess, that, for the next couple of decades at any rate, most degree-oriented adults will be accommodated in traditional college programs; largely through administrative arrangements such as more flexible schedules and more convenient locations. It is important to remember, nowever, that most adult learners are not currently degree oriented. Unless the new availability of degrees for adult learners raises degree aspirations (a real possibility in my opinion), noncredit opportunities sponsored by a variety of educational providers are likely to dominate the learning society of the future.

Lesst all of this activity on the part of both colleges and adult learners lull you into a false sense of security that there is no need for any social policy, let me express some personal concerns about what is going on in the absence of visible federal leadership in the lifelong learning movement.

First, I am becoming increasingly concerned about the over-eagerness of some colleges to attract adult learners into college classrooms, more it must

be acknowledged in the interest of institutional survival than social good. There is now substantial research to indicate that the average adult in the United States is already an amazingly active learner, if by learner we mean one who is engaged in self-planned learning projects--some self-taught, some taught by friends and neighbors, some taught in organized classes (Tough, 1971; Penland, 1977, and Co 974 and 1975). Although I am not anadvocate of deschooling am not sure I want to perpetuate into the adult years the idea of lifelony schooling either. There is a legitimate concern, I think, that the more effective colleges are in recruiting adults into traditional college programs, the more adults will be attracted away from self-directed learning projects into programs designed, directed, and made legitimate by others. The point of the learning society, afterall, is to develop independent, self-directed learners. /It is not to create a society in which learners become increasingly dependent on an educational establishment to decide what, when, where, and how people should learn. I believe that all education, especially postsecondary education, should be directed toward making people more self-directed learners, and colleges can contribute very constructively to that goal if they are encouraged to think beyond institutional survival to providing for the real needs of adult learners.

My second concern about the lack of federal leadership with resepct to adult learning is related to the continuing problem of equal opportunity.

Having fought that battle with at least some success for 18 year olds, here it is raising its ugly head again for 30 year olds. There is probably more opportunity now for young disadvantaged students to gain access to college than for older disadvantaged adults to continue the kinds of education that might be useful to them.

Over three-fourths of American adults say they would like to continue their dearning, but less than one-third of them are currently doing so in organized learning activities (Carp, Peterson, and Roelfs, 1974). The non-participants are clearly the less advantaged groups in society, and researchers are beginning to identify some of the differences between actual learners and those who say they are interested but who are not currently participating.

These findings have included as follows (and Zusman, 1979; Cross, 1978a; and Cross, 1979 for further details):

- opportunities, and they are more interested than current learners in educational and career counseling.
- 2) Would-be learners are even more interested in job-oriented education than current learners and they prefer the more active forms of learning to traditional classroom lectures. On the job training, internships, and field-work are popular ways to learn.
- 3). Would-be learners are more extrinsically motivated than current learners. They are primarily interested in obtaining some type of certification or degree that has credibility in the marketplace.
- 4) Would-be learners are more likely than present participants to perceive the cost of education as a barrier to further learning. While cost as a real barrier is probably overestimated², the decline in noncredit enrollments in some California community colleges when fees were instituted as a result of Proposition 13 bears close watching (Callan, 1978).

There is evidence that many adults have no information about costs, and many who claim interest do not participate even when funds are available from unions or employers or when education is free (Cross, 1979).

These findings indicate that if colleges are to gain a larger share of the adult learning market, they will have to move to attract more would-be learners. That, according to current research, means more pragmatic job-related education for less affluent and less academically-oriented adults.

If I were a federal policy maker, faced with really tough competing social demands and limited funds for education, my first priority would be to put increased dollars into funding for Education Information Centers, which are designed to make the connection between those where the connection between the connection between

- 1) They would benefit the less advantaged segments of society somewhat more than today's relatively advantaged adults, who obviously already know about existing opportunities. Thus they would begin to address the current inequities in adult education.
- 2) Information and referral centers would help colleges and other educational providers utilize their resources more fully, while getting across the message that the Learning Society consists of a rich variety of learning options provided by schools and colleges, industry and unions, churches and YMCAs, the military and the media.
- 3) Well-managed information systems of available educational opportunities would help state and community planners provide for the needs of adult learners, while reducing overlap and waste.

4) Last, but not least, putting a significant amount of money into Education Information Centers would make a strong public statement that lifelong learning and the full utilization of a wide variety of learning resources is legitimate, desirable, and a necessary goal of the Learning Society. It would place the imprimatur of the Federal Government on lifelong learning.

On the other hand, if no federal effort is made to acknowledge the social desirability of lifelong learning and adult education is left to the entrepreneurs, such providers, whether educational institutions or other agencies, will cater largely to the ready market of affluent, well-educated adults who will then become the determiners of the kind of education that is available—a distinct possibility that would almost certainly continue the widening of the gap between the educational "haves" and "have nots."

New Students

Just as almost everyone is aware of the rising age of college students, so too almost everyone is aware of the influx of new kinds of young people into college. The huge success story of the past decade of higher education has been improved access for ethnic minorities and women.

Women have virtually-closed the gap that previously existed between men and women in college entrance rates, and parity in college access and choice have almost been achieved for ethnic minority groups. In 1975, 13.5 percent of the freshmen entering college described themselves as minorities, which is roughly the minority portion (13.8 percent) of 18 to 21 year olds in the population (Leslie, 1977).

Researchers conducting the extensive National Longitudinal Study of high school gradua as concluded that black underrepresentation in college enrollments is "wholly a function of class background and academic preparation... Controlling for social class and scholastic aptitude, blacks of both sexes are more likely than whites to attend college" (Peng, Stafford and Talbert, 1977). The trouble with that conclusion is that while statisticians can control for social class, minority students cannot. We have a acknowledge, I think, that while racial discrimination per se may not be keeping minorities out of college; the inevitable accompaniments of the long history of racial discrimination are still operating. Blacks are heavily overrepresented in the lower quartile of family income and scholastic aptitude. And academic preparation and social class remain the primary predictors of whether a high school graduate will enter college, where he or she will go, and how long he or she will persist.

Given equal academic qualifications, a young person in the top socioeconomic quartile is almost twice as likely to enter college as a person in
the lowest quartile. Ability, however, has an even more potent influence.
Holding SES constant, a student in the top academic ability quartile has over
three times as great a chance of entering college as one in the lowest
quartile (Peng, 1977). Perhaps the most surprising and disappointing finding
of the National Longitudinal Study is that despite all of the attention given
over the past two decades to the factors of family income in college
attendance, the role of social class was just about as strong in 1972 as it
was in 1961 (Peng, 1977).

My personal conviction is that progress in obtaining equal educational opportunity in America is at a standstill until we address the underlying issues of the academic preparation and motivation of the lower classes. As I have put it elsewhere (Cross, 1976), I believe it is time now to move beyond access for all toward education for each. Until we can make education a positive and worthwhile experience for young, who are not successful or happy in school, in school long-enough to become productive citizens in this increasingly complex society of ours.

So far remedial programs for New Students have been developed more through trial and error than through systematic research and development. Community colleges have taken a lot of criticism for what more entrenched academics call, lowered standards and high dropout rates. But let us remember that the community colleges are working with learning problems not even comprehended by more traditional faculty members. In my opinion, the community colleges have made a remarkable contribution to equal educational opportunity, largely through the efforts of dedicated teachers. What is needed now is additional funding for experimental programs for New Students, evaluation and follow up of how these students proceed through the educational system, and new methods for developing and linking adequate diagnosis of learning problems to appropriate instructional methods:

The problems that we are beginning to see is that the New Students of today are the potential adult learners of tomorrow. Unless we begin to worry about their education today; we will have to worry about their access tomorrow.

And now I have come full circle. There are still problems of access and quality education for both New Students and nontraditional students. The most urgent priorities, however, are equality of access for nontraditional



learners and quality education for New Students.

BIBLIOGRAPHY

- Arbeiter, Solomon, Carol B. Aslanian Schrerbeck, and Rent, M. Bricke'l. 40 million Americans in career transition. The need for information. Future Directions for a Learning Society. New York: College Entrance Examination Board, 1978.
- Bashaw, W. L. The effect of community junior colleges on the proportion of local population who seek higher education. <u>Journal of Educational Research</u>, 1965, 58(%), 327-329.
- Best, Fred and Barry Stern. <u>Lifetime distribution of education</u>, <u>work</u>, <u>and leisure</u>. Washington, D.C.: Institute for Educational Leadership, Postsecondary Convening Authority, 1976.
- Bishop, John and Jane Van Dyk. Can adults be hooked on college? <u>Journal of Higher Education</u>, 1977, 48(1), 39-62.
- Boaz, Ruth L. <u>Participation in adult education final report 1975</u>. National Center for Education Statistics. Washington, D.C.: U. S. Government Printing Office, /1978.
- Gallan, Patrick. Report of the director, California Postsecondary Education Commission, Sacramento, November 1978.
- Carp, Abraham, Richard Peterson, and Pamela Roelfs. Adult learning interests and experiences. In K. Patricia Cross and John R. Valley & Associates, Planning non-traditional programs. San Francisco: Jossey-Bass, 1974.
- Coolican, Patricia M. Self-planned learning: Implications for the future of adult education. Syracuse, N.Y.: Educational Policy Research Center, Syracuse University Research Corporation, 1974.
- Coolican, Patricia M. An addendum to the 1974 paper: Self-planned learning:

 Implications for the future of adult education. Syracuse, N.Y.:

 Educational Policy Research Center, Syracuse University Research
 Corporation, 1975.
- Cross, K. Patricia. Beyond the open door. San Francisco: Jossey-Bass, 1971.
- Cross, K. Patricia. Beyond education for all--Toward education for each.

 The College Board Review, No. 99, Spring 1976, 5-10.
- Cross, K. Patricia. The missing link: Connecting adult learners to learning resources. New York: The College Board, 1978 (a).
- Cross, K. Patricia. <u>Museums in the learning society</u>. Speech delivered to the annual meeting of the American Association of Museums, Kansas City, May 30, 1978. (b)

CIS⊊T®GRAPHY (CONT

- Cross, K. Patricia. Adult learners: Characteristics, needs, and interests.
 In R. E. Peterson and Associates, Lifelong learning in America.
 San Francisco: Jossey-Bass, 1979.
- Cross, K. Patricia and A. Zusman. The needs of non-traditional learners and the response of non-traditional programs. In C. B. Stalford (Ed.), An evaluative look at non-traditional education 1979. Washington, D.C.: National Institute of Education, 1979.
- Golladay, Mary A. The condition of education 1976. Volume Three, Part One.

 Education Statistics: Washington, D.C.: U.S. Government Printing

 Office, 1977.
- Henderson, Cathy. Changes in enrollment by 1985. Policy Analysis Service Reports, 3(1), June 1977. Washington, D.C.: American Council on Education, 1977.
- Kemp, Florence B. Noncredit activities in institutions of higher education for the year ending June 30, 1976. National Center for Education Statistics. Washington, D.C.: U. S. Government Printing Office, 1978.
- Leslie, Larry L. <u>Higher education opportunity: A decade of progress</u>. ERIC Higher Education Research Report No. 3, 1977. Washington, D.C.: The American Association for Higher Education, 1977.
- Peng, Samuel S. Trends in the entry to higher education: 1961-1972.

 Light Samuel S. Trends in the entry to higher education: 1961-1972.

 Light Samuel S. Trends in the entry 1977, 6(1), 15-18.
- Peng, Samuel S., Cecille E. Stafford and Robiń J. Talbert. National longitudinal study: Review and annotation of study reports. National Center for Education Statistics, Sponsored Reports Series NCES 78-238. Research Triangle Park, North Carolina: Center for Educational Research and Evaluation, 1977.
- Penland, Patrick R. <u>Individual self-planned learning in America</u>. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, July 1977.
- Ruyle, Janet and Lucy Ann Geiselman. Non-traditional opportunities and programs. In K. Patricia Cross and John R. Valley & Associates, Planning non-traditional programs. San Francisco: Jossey-Bass, 1974.
- Tough, Allen. The adult's learning projects. Toronto: Ontario Institute for Studies in Education, 1971.

BIBLIOGRAPHY (CONT.)

Trent, James W. and Leland L. Medsker. The influence of different types of public higher institutions on college attendance from varying socioeconomic and ability levels. Berkeley: Center for Research and Development in Higher Education, University of California, 1965.

Willingham, Warren. Free-access higher education. New York: College Entrance Examination Board, 41970.